

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
TO THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of : Elmar KIBLER et al.
Serial No. : 10/522,097
For : SYNERGISTICALLY ACTING HERBICIDAL MIXTURES
Filed : January 24, 2005
TC/A.U. : 1616
Examiner : Courtney Brown
Docket No. : 3165-115
Customer No. : 6449
Confirmation No. : 9494

MAIL STOP- Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
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April 1, 2010

APPELLANT'S REPLY BRIEF UNDER 37 C.F.R. §41.41

Sir:

This is in reply to the Examiner's Answer dated February 4, 2010. This Reply is being timely filed on April 1, 2010 under 37 C.F.R. §41.41(a)(1).

In view of the Examiner's withdrawal of the obviousness type double patenting rejection, the only remaining issue for appeal is whether the invention claimed in claims 1, 25, 26 and 30-37 can reasonably be found obvious under 35 USC §103(a) over Sievernich et al. (CA 2,334,955). As discussed in the appeal brief, Sievernich generally discloses synergistic binary mixtures, comprising as component A) 4-[2-methyl-3-(4,5-dihydroisoxazol-3-yl)4-methylsulfonyl-benzoyl]-1-methyl-5-hydroxy-1H-pyrazole and as component B) a herbicide selected from a long list of individual active ingredients, including clopyralid. Though Sievernich indicates on page 34 that in one embodiment

component B can be two herbicidal compounds, Sievernich does not indicate which two compounds out of the list of numerous possibilities would be suitable for a ternary mixture. One skilled in the art knows that introducing a third component to a highly potent binary mixture could reduce the efficacy due to antagonizing interactions. The difference between Sievernich and the presently claimed invention is the function of the third component which affects the selection of the third component. Sievernich did not consider the possibility that a third component could produce an additional synergistic effect separate from and in addition to the synergistic effect produced by the binary mixture. Sievernich generally teaches that, if required, a third component can be added to a synergistic binary mixture in order to broaden the weed spectrum. Sievernich does not suggest that the third component can or should enhance the synergistic effect produced by the first and second components and thus does not indicate which compounds should be used to produce such an effect. The third component can be selected by one skilled in the art (farmer) in response to the prevailing conditions in the field (observed weed pressure). In contrast to Sievernich, the present claims are directed to a specific, narrowly defined mixture using components which have been shown to have the desired effect. The additional synergistic effect produced by the specific components used in the present invention could not have been predicted from Sievernich. While the present claims do not specifically recite that the third component produces a second synergistic effect separate from the synergistic effect produced by the first two components, this characteristic is inherent in the specific components recited in the present claims. In other words, Sievernich discloses a long list of possible

components which could be used in his mixture but without knowing that a second synergistic effect is possible or which components would produce such an effect, one skilled in the art could not arrive at the present invention without the use of impermissible hindsight. Applicants point out that it is very unlikely (and unpredictable) that all of the possible components recited in Sievernich can be combined in a ternary mixture to produce a mixture in which the first and second components produce a synergistic effect and the third component produces a second synergistic effect.

The Examiner's Answer contends that Sievernich teaches a binary mixture using component A (according to the present invention) with clopyralid; a binary mixture using component A (according to the present invention) with flumetsulam or atrazine; and a ternary mixture using a 3-heteroxyxlyl-substituted benzoyl derivative as component A and two herbicidal compounds as component B. Therefore, the Examiner's Answer concludes that it would have been obvious and predictable to combine component A with both clopyralid and flumetsulam or atrazine to arrive at the present invention. While such a combination is theoretically possible based on the large list of possible components disclosed in Sievernich, it was not predictable that this particular combination would produce the second synergistic effect discovered by the present inventors. Some combinations of components disclosed in Sievernich would a) merely broaden the weed spectrum (i.e. the third component would not enhance the activity of the first two components against specific plants but would provide protection against other types of plants); b) some combinations would have a purely additive effect (i.e. the third component would enhance the activity of the first two components against specific

plants but only due to the increased amount of herbicide); and c) some combinations could produce a second synergistic effect in addition to the synergistic effect produced by two of the components alone. One skilled in the art knows that possibility c) is rare and cannot be predicted based on the disclosure of the components. Without any suggestion that such a mixture exists, one skilled in the art would not have been motivated to look for such an extraordinary mixture in view of the sheer multitude of theoretical possibilities based on Sievernich's disclosure.

In view of the fact that Sievernich does not disclose the narrow, specific tertiary mixture recited in the present claims or that a second synergistic effect which boosts the already present synergistic effect between the two main active ingredients is possible and depends on the specific components used, applicants contend one skilled in the art could not have arrived at the presently claimed invention without the use of impermissible hindsight.

For the forgoing reasons and the reasons provided in Appellant's Appeal Brief, Appellant respectfully request that the Board reverse the one remaining outstanding rejection and indicate the allowability of claims 1,25, 26 and 30-37.

In the event that this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fee or credit any overpayment pursuant to 37 §C.F.R. 1.16 or §1.17 to Deposit Account No. 02-2135.

Respectfully submitted,

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